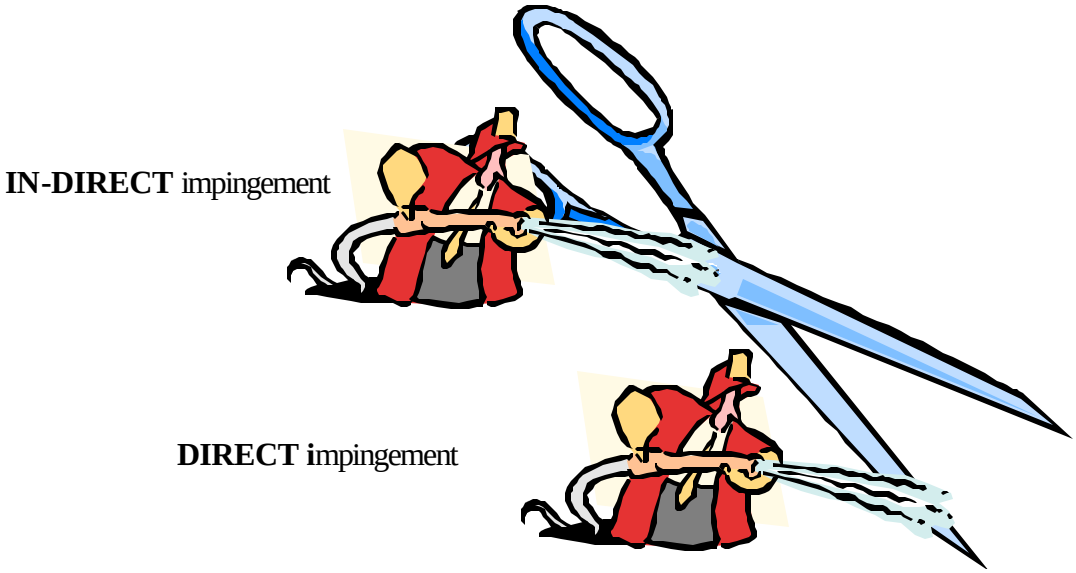
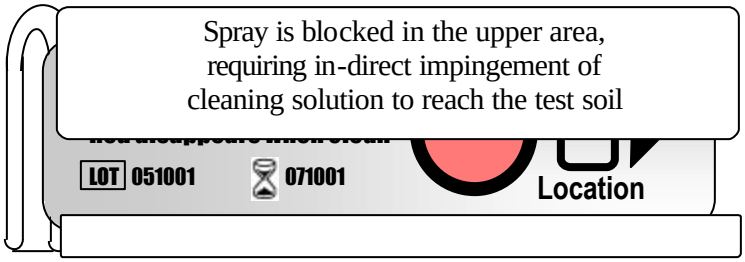
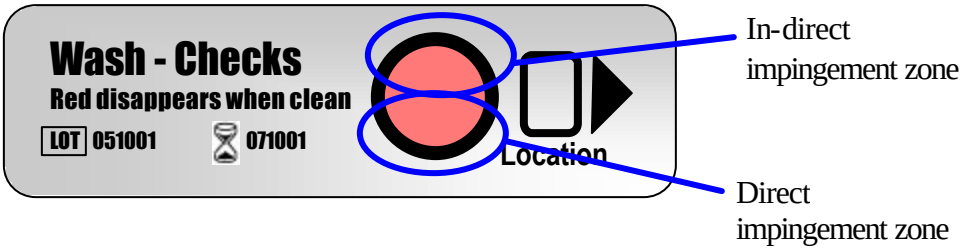
Wash Checks Troubleshooting Guide

Wash Checks test soil and Wash Checks holder. A dual challenge for washers that provide improved diagnostics for washer effectiveness determination.

Water spray directly onto the surface of surgical instruments (direct impingement) is important for good cleaning. Some areas on instruments (such as inside hinges) only allow in-direct impingement. The Wash-Checks Holder provides the means to test a Washer's ability to generate effective direct and in-direct impingement while the test soil concentrates on cleaning chemistry







CLEANING LEVELS

0

Detergent Chemistry: Good

Impingement: Good

1

Detergent Chemistry: Medium

Impingement: Good

2

Detergent Chemistry: Weak

Impingement: Good

3

Detergent Chemistry: Medium

Impingement: Weak

4

Detergent Chemistry: Weak

Impingement: Good

5

Detergent Chemistry: Weak

Impingement: Weak

LEVEL 0 VISUALLY CLEAN

Detergent Chemistry: Good Impingement: Good

This is the level everyone is striving for. Cleaning is obtained in areas that saw direct impingement and in areas that only see indirect impingement such as hinges and the like. Although overloading and can defeat good chemistry and good impingement, solution flowing over all surfaces of instruments appear to be effective in cleaning in this instance. Large items can block the spray from above and effectively create a spray shadow that prevents items underneath from seeing good spray impingement. In this case, even the best impingement and the best detergent chemistry could be ineffective.

Level 1 EXPOSED HALF CLEANED, COVERED HALF PARTIALLY CLEAN

Detergent Chemistry: Medium Impingement: Good

The portion of Wash Checks that was exposed to direct impingement is clean. The half that saw indirect impingement has remained dirty but exhibits some dissolving of the soil.

This indicates that the detergent chemistry is dissolving some of the test soil and some cleaning is being obtained by the combination of direct impingement and chemistry. The chemistry does not appear to be able to dissolve all the soil by itself. It needs the assistance of the impingement power of the washer. Since direct impingement is needed to achieve good cleaning, overloading should be strictly avoided. Instruments piled atop one another could prevent the bottom instruments from seeing direct impingement.

Possible reasons for this condition may merely be insufficient contact time for the detergent chemistry to work.

Note: Do not run Wash Checks through a washer disinfector twice. The heat from the disinfection step can denature the Wash Checks proteins and make them very difficult to remove.

Since direct impingement is good, clogged spray arms are probably not a problem. However, clogged spray arms could make it appear that chemistry is weak because sufficient volumes of solution are prevented from contacting the test. Make sure spray arms are unclogged and free to rotate before making other changes.

Detergent dosage could be restricted. Check detergent container, delivery tubing and filters for clogging. Increased dosing could enhance cleaning if delivery systems are in good shape.

Increasing the temperature can enhance cleaning but caution should be exercised not to exceed detergent manufacturer's specifications. Temperatures above 140°F can cause proteins, such as blood, to be more difficult to clean, not easier.

LEVEL 2 MOSTLY CLEAN WITH RIM OF UNTOUCHED SOIL

Detergent Chemistry: Weak Impingement: Good

The portion of Wash Checks that was exposed to direct impingement is clean. The half that required indirect impingement has only a small amount of full strength soil remaining around the edge.

The strong impingement of this machine has removed most of the test soil without actually dissolving it. The impingement is so strong; it even had enough power to blast away some of the test soil after changing direction 90° and flowing into the indirect impingement zone of the test.

Strong impingement is a perfectly acceptable way of cleaning. It works best on surfaces directly contacted by the spray. One must be cautious not to block this direct impingement spray. Overloading this machine should be strictly avoided. Large items can block the spray from above and effectively create a spray shadow that prevents items underneath from seeing good spray impingement. In this case, even the best impingement and the best detergent chemistry could be ineffective.

The spray arms do not appear to be clogged in this machine. The detergent chemistry could stand some improvement if the user wishes to dissolve proteins present on instruments.

Check for empty detergent drums or clogged detergent delivery tubing and filters.

LEVEL 3 GENERALLY UNIFORM, PARTIAL DISSOLVING

Detergent Chemistry: Medium Impingement: Weak

The detergent chemistry is working to a degree. Since the direct impingement area looks nearly the same as the indirect impingement area, the chemistry is doing most of the work with very little help from impingement force.

Look for things that cause lower solution flow such as clogged drains that impede solution return to the pump. Low pressure pumping could also limit impingement force. Make sure the spray arms are not clogged. Clogged spray arms will not deliver sufficient impingement force to assist the chemistry in cleaning. By preventing large volumes of solution from contacting the test, it could even cause the chemistry to appear weaker than it is. Stronger detergent chemistry is important in a machine that cannot deliver strong impingement. If it is determined that increased impingement force is not possible, improvement in the detergent chemistry should be tried.

The following items improve cleaning through chemical means:

a. Increased contact time. Increase the wash phase time to twice the current setting.
Note: Do not run Wash Checks through a washer disinfector twice. The heat from the disinfection step can denature the Wash Checks proteins and make them nearly impossible to remove.

b. Increased temperature. Hotter cleaning solutions are generally more effective. Increasing the temperature can enhance cleaning but caution should be exercised not to exceed detergent manufacturer's specifications. Temperatures above 140°F can cause proteins, such as blood, to be more difficult to clean, not easier.

c. Pre-treatment. Pre-soaking with various cleaners or sprays can essentially increase contact time by taking advantage of the period between the end of the surgical procedure and the beginning of the washing process. Preventing blood proteins from drying out also helps.

d. Increase dosage. Try using more detergent in each cycle and/or check that the filter in the delivery tubing is not clogged thereby reducing the dosage.

e. Increase pH of the cleaning solution. High pH does a better job of dissolving proteins than neutral pH. Caution should be exercised approaching pH 11.5 due to the possibility of damaging the surface of soft metal items in the load. Solutions with a pH close to 11.5 and even higher do a better job of dissolving proteins. So, it's a matter of inching as close as possible without going over if soft metal items are present in the load. Stainless steel instruments can stand rather high pH. Separating soft metal items into lower pH loads will allow the more effective high pH solutions to be used on stainless steel items without damaging soft metal items. If the pH is high enough, there is no danger of excessive temperature. High pH can allow for higher temperature washes, which can be much shorter and actually more effective at cleaning.

LEVEL 4 BOTTOM HALF CLEAN, TOP HALF UNTOUCHED

Detergent Chemistry: Weak Impingement: Good

When the area affected by direct impingement is clean but the indirect impingement area looks like it has not been touched it means that the detergent chemistry is contributing very little to the cleaning process. The impingement power is good but not sufficient to do all the cleaning. Assistance from chemistry is needed.

The following items improve cleaning through chemical means:

a. Increased contact time. Increase the wash phase time to twice the current setting.

Note: Do not run Wash Checks through a washer disinfector twice. The heat from the disinfection step can denature the Wash Checks proteins and make them nearly impossible to remove.

b. Increased temperature. Increasing the temperature can enhance cleaning but caution should be exercised not to exceed detergent manufacturer's specifications. Temperatures above 150°F can cause proteins, such as blood, to be more difficult to clean, not easier.

c. Pre-treatment. Pre-soaking with various cleaners or sprays can essentially increase contact time by taking advantage of the period between the end of the surgical procedure and the beginning of the washing process. Preventing blood proteins from drying out also helps.

d. Increase dosage. Try using more detergent in each cycle and/or check that the filter in the delivery tubing is not clogged thereby reducing the dosage.

e. Increase pH of the cleaning solution. High pH does a better job of dissolving proteins than neutral pH. Caution should be exercised approaching pH 11.5 due to the possibility of damaging the surface of soft metal items in the load. Solutions with a pH close to 11.5 and even higher do a better job of dissolving proteins. So, it's a matter of inching as close as possible without going over if soft metal items are present in the load. Stainless steel instruments can stand rather high pH. Separating soft metal items into lower pH loads will allow the more effective high pH solutions to be used on stainless steel items without damaging soft metal items. If the pH is high enough, there is no danger of excessive temperature. High pH can allow for higher temperature washes, which can be much shorter and actually more effective at cleaning.

LEVEL 5 TOTAL LACK OF SOIL REMOVAL

Detergent Chemistry: Weak Impingement: Weak

Total lack of soil removal is usually due to total lack of contact with cleaning solution. Look for severe overloading or spray shadows. Severely blocked spray arms could also prevent cleaning solution from contacting the test. Other possibilities include lack of cleaner. Check for empty detergent drums or blocked delivery tubing. Do not overlook the possibility of washer by-pass.

Other possible causes include excessive temperature. Keep temperatures at 140°C or below unless high pH detergents are being used.